UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604

DATE: October 9, 2008

SUBJECT: Clean Air Act Inspection of U.S. Steel Corporation – Great Lakes Works
Ecorse and River Rouge, Michigan

FROM: Ethan Chatfield, Environmental Engineer
Air Enforcement and Compliance Assurance Section (IL/IN)

Monica Onyszko, Environmental Engineer
Air Enforcement and Compliance Assurance Section (IL/IN)

Brian Dickens, Environmental Engineer
Air Enforcement and Compliance Assurance Section (MN/OH)

Gina Harrison, Environmental Scientist
Air Enforcement and Compliance Assurance Section (MN/OH)

THRU: Bill MacDowell, Chief
Air Enforcement and Compliance Assurance Section (MN/OH)

TO: File

Date of Inspection August 25-26, 2008

Attendees
Ethan Chatfield, EPA, Air Inspector
Monica Onyszko, EPA, Air Inspector
Brian Dickens, EPA, Air Inspector
Gina Harrison, EPA, Air Inspector
Bernie Sia, Michigan Department of Environmental Quality (MDEQ), Air Inspector
Katie Koster, MDEQ, Air Inspector
Mark Barnes, U.S. Steel Corporation - Great Lakes Works, Manager Environmental Control
Mark Gornick, U.S. Steel Corporation - Great Lakes Works, Environmental Manager
Dave Rintoul, U.S. Steel Corporation - Great Lakes Works, General Manager
Paul Bush, Veolia Water, Air Monitoring Technician (U.S. Steel - Great Lakes Works contractor)
Paul Krystyniak, U.S. Steel Corporation – Great Lakes Works, Environmental Control
Milosz Fodor, U.S. Steel Corporation - Great Lakes Works, Environmental Control
Ralph Alen, U.S. Steel Corporation - Great Lakes Works, Control Room Operator, Blast Furnace B2

Bill Jones, U.S. Steel Corporation – Great Lakes Works, Operations Manager, Blast Furnace D4
Patrick McCullough, U.S. Steel Corporation - Great Lakes Works, Process Manager
Steve Wasko, U.S. Steel Corporation - Great Lakes Works, Pickling Line Manager
James Zamiska, U.S. Steel Corporation – Great Lakes Works, Ironmaking Division Manager
George Roberts, U.S. Steel Corporation – Great Lakes Works, Process Coordinator for Boilerhouse Operations

Purpose of Inspection

The purpose of the inspection is to assess the compliance status of the U.S. Steel Corporation - Great Lakes Works facility with the Clean Air Act (CAA).

Company Description and Background

Physical Location: Situated along the Detroit River in Ecorse and River Rouge, Michigan

Mailing Address: No. 1 Quality Drive
Ecorse, Michigan 48229

Phone Number: (313) 749-2100

Primary Contact: Mark Gornick, Environmental Manager
(313) 749-3603

Pre-Meeting Summary

Ethan Chatfield, Monica Onyszko, Brian Dickens, Gina Harrison (EPA inspectors), Bernie Sia, and Katie Koster (MDEQ inspectors) arrived at the facility at approximately 12:00 PM on August 25, 2008. They presented credentials at Pass Control to U.S. Steel (USS) security and to Mark Gornick, one of the plant's environmental managers. Mr. Gornick drove the group to meet Dave Rintoul, General Manager, at the plant's main office. Mr. Rintoul explained that he has been at Great Lakes Works since March 2008. He previously worked at USS - Granite City Works in Granite City, Illinois. Mr. Dickens began the discussion with Mr. Rintoul by laying out the inspection schedule: an opening conference, followed by a brief plant tour, slag pit inspection, blast furnace inspection, a basic oxygen process (BOP) inspection, and a boiler inspection, lasting approximately one day and a half. After a brief introduction of operations at the plant, Mr. Rintoul informed the inspectors of his intent to meet with the group again after the inspection was completed.

Mr. Gornick drove the group to the plant's environmental office where he introduced Mark Barnes, Manager of Environmental Control, and several staff personnel. Mr. Barnes asked if this visit was related to an information request sent via Section 114 of the CAA from Research Triangle Park regarding boilers, and the group clarified that this inspection is independent of that request. Mr. Barnes stated that Blast Furnaces A1 and D4 were down for maintenance, but Blast Furnace B2 was running during the time of the inspection. It was further explained that production levels at Blast Furnace B2

were down because of a turboblower issue. When asked about tapholes by the EPA inspectors, Mr. Barnes replied Blast Furnace A1 has one taphole and Blast Furnaces B2 and D4 have one taphole.

In terms of the BOP furnaces, BOP Furnace #25 was down for maintenance on this day of the inspection and BOP Furnace #26 would be down on the second day of the inspection.

Mr. Barnes next gave a brief overview of plant history, stating that USS purchased the 1,100 acre plant from National Steel's assets out of bankruptcy in 2003, after which the plant was significantly downsized. Mr. Gornick stated the plant currently has about 2,400 employees, and operates 24 hours for 7 days a week with 3 shifts. At full capacity, the plant can produce approximately 42 heats per day; however, actual production rates are down to 19 heats per day due to maintenance of blast furnaces. The inspectors informed the managers of the plan to divide and inspect different areas of the plant for maximum efficiency.

Prior to beginning the plant tour and inspection, EPA inspectors were briefed on USS safety rules.

Inspection Observations/Summary – August 25, 2008

Zug Island

The inspection began at approximately 1:15 AM on August 25th at Zug Island, located at the northeast end of USS property. The island houses the blast furnaces, slag pits, casthouses, and boilers, and is connected to the mainland plant by a dedicated railway. In an office, Mr. Gornick explained the process in which torpedo cars are filled with hot iron and transported without covers to the BOP Shop by remote controlled trains. Blast Furnaces A1 and B2 are located near each other and both employ pulverized coal injection to reduce coke usage. Blast Furnace C is being dismantled. Coke for the blast furnaces is received from EES Coke, LLC (a DTE Energy company) and USS Clairton Works, among others.

EPA inspectors viewed a safety video, which addressed carbon monoxide, carbon dioxide and hydrogen sulfide emissions, as well as other topics, as required by USS prior to visiting the blast furnace area.

Slag Pit

The inspectors were introduced to Milosz Fodor of the Environmental Control department. Mr. Fodor explained the process in which slag is delivered from the casthouse into the slag pit for quenching. He also explained that hydrogen peroxide is added to the water sprays at the slag pit in order to reduce hydrogen sulfide emissions. When touring the slag pit area approximately at and after 2:45 PM, Ms. Onyszko noted a scent of hydrogen sulfide. Ms. Onyszko and Paul Bush took visible emission (VE) readings at the east slag pit of Blast Furnace B2. VE readings are included in Attachment D. The readings were taken while no slag was being added to the pit and no water was being sprayed on the pile.

While Ms. Onyszko was taking slag pit VE readings, Mr. Dickens observed the top of Blast Furnace B2. There were brief releases of high opacity during each pressure equalization, which happened approximately every few minutes. One possible cause of these releases is a leaking lower bell, which allows particulate from the furnace to escape into the area between the bells. When the pressure equalization valve is open to atmosphere, that particulate escapes.

The inspectors observed USS employees digging new paths to redirect slag from the casthouse into the slag pit adjacent to Blast Furnace B2.

Blast Furnace
At approximately 3:20 PM, USS personnel and the inspectors went to the Blast Furnace B2 Casthouse. First, the control room was toured, which, among other things, contained vision control screens with different shots of the casthouse. When asked about dust catcher dumps at the casthouse, Mr. Fodor explained that two valves are used during the process to impede the dump, so that it is not falling straight down through the duct. Dust catcher dumps are performed once per shift, which is three times per day. Ralph Alen was in the control room and also provided casthouse information to the inspectors. The USS personnel explained that Blast Furnace B2 possibly had a leaking bell, since emissions from the furnace top were higher than normal.

Mr. Fodor led the inspectors through an inspection of the casthouse. In the casthouse, a furnace was being tapped. There was a hood above the taphole exit and only a small amount of particulate matter escaped the hood's capture and rose to the roof monitor. USS personnel were performing maintenance work on the troughs.

The group headed outside the casthouse at approximately 3:51 PM in order to perform additional VE readings at the slag pit. While outside, Ms. Onyszko noticed that the torpedo cars headed to the blast furnace were not smoking. The group waited for slag transfer into a slag pit in order to do a VE reading, but it did not happen during this period.

During this time, however, Mr. Dickens spoke with Mr. Bush about actions USS takes to suppress dust from the slag pit. He explained that USS installed water sprays near the end of the pit to be used when slag is dug from the pit and loaded into trucks. The spray was not in operation at the time of the discussion, so Mr. Dickens was not able to view its efficacy. USS personnel and the inspectors left Zug Island and returned to the main office. The inspectors left the plant at approximately 5:00 PM.

Inspection Observations/Summary – August 26, 2008

The EPA inspectors and Katie Koster arrived at USS at approximately 8:30 AM. Mr. Sia did not attend the inspection on this day. Mr. Gornick picked the group up in a plant vehicle. While being transported through the plant, smoke was visible from the OmniSource Corporation, which is a scrap metal recycler with a facility in the vicinity of USS. Ms. Onyszko told Mr. Gornick that on this day she would like to do VEs readings during a BOP furnace blow. She was told that a blow would occur at approximately 11:40 AM.

It was decided that Ms. Harrison, Ms. Onyszko, and Ms. Koster would inspect the pickling lines prior to heading over to the BOP Shops. Mr. Dickens and Mr. Chatfield decided to inspect the blast furnaces, casthouses, and slag pits at Zug Island.

Boilerhouses
Mr. Chatfield met with George Roberts and Mr. Gornick from the USS staff. Mr. Roberts has been at USS Corporation - Great Lakes Works for 38 years, working at the Zug Island boilerhouses for the past 20+ years, and the main plant boilerhouse for the remaining years.

The plant has four boilerhouses. All boilers are referred to by their boilerhouse number first and boiler number second. For example, the package boilers are Boilers #3-1 and #3-2.

A natural gas-fired boilerhouse, referred to as the package boilers or Boilerhouse #3, was installed in 1979 and 1980. These boilers have not operated since an eastcoast power outage in August 2003. The natural gas boilers have electric fans which allowed the mill to restart after the power outage. These boilers were purchased slightly used from Louisiana at the time. Prior to their operation, the plant purchased steam from the Detroit Edison plant down the road.

Mr. Roberts explained that when USS took control of the plant, they were in the process of preparing for an overhaul on Boiler #3-1. USS stopped work on the overhaul and told plant staff they are no longer authorized to work on the boilers. A gaping hole remained in the side of the boiler and a burner remained removed from the unit. The boilerhouse was not well maintained, with standing water on the floor and no activity occurring in the boilerhouse. Mr. Roberts stated that these units were shutdown due to the cost of natural gas and also were no longer needed because the plant switched to operating only two blast furnaces. Mr. Roberts stated that Boiler #3-1 is "totally inoperable" and it is "questionable whether it could ever run again." Boiler #3-2 would need work before being operational again.

Boilerhouse #1 contains a total of six boilers. Two of the six boilers (Boilers #1-4 and #1-6) have not operated since the early 1980's. Mr. Roberts stated they would require "many dollars to be made operational again." These two boilers are still included in the Title V permit. Mr. Roberts stated that there is talk of restarting Blast Furnace A1 and he is being asked to look at options for additional steam capacity. Boilers #1-1, #1-2, and #1-3 were constructed in 1936 and Boiler #1-5 was constructed in 1938. The boilerhouse trailer did not post information on the two shutdown boilers. All boilers in Boilerhouse #1 have a capacity of 100,000 pounds (lbs) of steam per hour and are largely limited to 60,000 lbs/hour due to their age and use. Boilerhouse #2 is the primary boilerhouse.

Boilers in Boilerhouse #1 and #2 burn primarily blast furnace gas (BFG) and coke oven gas (COG), and utilize natural gas (NG) primarily for startups. The plant tries to maximize the use of BFG because it is free and uses COG only as needed. The COG cost is half the market price of NG.. The boilers primarily provide steam for the blast furnace turboblowers, as well as provide heat for various smaller activities throughout the mill. The boilers in Boilerhouse #1 were originally designed to burn coal, but the plant stopped burning coal many years ago (likely pre-Clean Air Act) and some of the coal grating has been removed or is inoperable.

Mr. Chatfield asked about major rebuilds, replacement, or modifications to the boilers. Mr. Roberts stated that all boilers have superheaters, but he is not sure if they are original or have been replaced in total at some point. The economizer was rebuilt on Boiler #1-5 to increase its efficiency. Boiler #1-2 was retubed. Boiler #1-1 had half of the superheater replaced, with the second half replaced about three years later. All of the superheater parts were purchased at once. Mr. Roberts believes that the records should still be maintained on-site.

Mr. Roberts provided a daily and monthly year-to-date Boiler Fuel Balance spreadsheet to EPA during the inspection (see Attachment C). It appears that the Boilerhouse #1 burns approximately 65% BFG, 30% COG, and 4% NG; and Boilerhouse #2 burns 73% BFG, 20% COG, and 7% NG.. Mr. Roberts stated that the plant is also permitted to burn (and does burn when possible) COG in the 80" Mill in the main plant. USS is contracted with DTE Energy, which owns the coke battery on Zug Island, to purchase the COG before anyone else, including DTE Energy's nearby River Rouge Generating Station.

None of the BFG/COG-fired boilers at the plant have any emission controls. The BFG goes through a venturi and wet scrubber to remove particulates before being burned in the boilers.

The plant has a total of three turboblowers to provide "wind" to a blast furnace. Mr. Roberts is not aware of any modification that increased capacity since 2000. Turboblower #7 was installed in the mid-to-late 1980's and overhauled in March 2006. The other two turboblowers are original.

Boilerhouse #2 has five 100,000 lbs/hour boilers, numbered #2-1 through #2-5, all built in 1951. The plant attempts to limit the boilers to 80,000 lbs/hour. This is in case one of the boilers goes down, the plant then would have extra capacity built in to "make up the difference."

The coke battery is responsible for flaring excess COG. USS has two BFG flares to flare excess BFG. The coke battery uses about 3-4 million British Thermal Units (BTU) of BFG (equivalent to about two boilers). Mr. Roberts described a scenario where occasionally the coke battery sends BFG back into their system, referred to as reversing, which results in periodic BFG flaring. USS tries to minimize these events. Approximately 10% of BFG is currently flared.

After the 2003 power outage, Boiler #2-1 was completely rebuilt. The plant was forced to run the boiler into the ground to keep the plant operational. Mr. Roberts described that they had to "rebuild the whole thing." The air heater melted off the back of the boiler and was completely replaced. All the boiler tubes warped and were replaced. A complete overhaul was performed. Mr. Roberts stated that the only thing that really survived was the front wall, the burners, and some fans.

Boiler #2-3 had the air heater retubed in 2003. Every boiler in Boilerhouse #2 has had the control system rebuilt. There are no economizers on any boiler in Boilerhouse #2. Mr. Roberts is not aware of any superheater replacement on boilers in Boilerhouse #2. Mr. Chatfield requested that USS provide approximate fuel consumption for all boilerhouses.

The Main Plant Boilerhouse has two boilers constructed in 1969. They are capable of burning COG or NG, but not at the same time. USS is currently looking to convert these boilers to burn both fuels at the same time to reduce downtime for fuel switching. The boilers have always had the ability to burn COG, except for a 4-5 year period (rough estimate) during which a new COG line was being laid. Both boilers, referred to as Boilers #8 and #9, have a rated capacity of 100,000 lbs of steam per hour, but Mr. Roberts believes that 70,000 lbs of steam per hour is a more realistic maximum.

Only one blast furnace was operating at the time of the inspection, so all boilers were running more COG then normal. The boilers must receive at least 10% stabilizing fuel (NG or COG). Excess fuel burned in the BFG flares (Zippos) have a set point that opens at around 50" of wc.

After these discussions, Mr. Chatfield, accompanied by USS personel, conducted a short walking inspection of all three boilerhouses on Zug Island. In Boilerhouse #3, Mr. Chatfield observed a large 10+ foot square section cut in the side of Boiler #3-1 (including sidewall boiler tubes) with what appeared to be some damaged tubes inside. The burner was removed from the front of the boiler and the boilerhouse did not appear to be well kept. Mr. Roberts noted that Blast Furnace D4 is near the end of its campaign and engineering is working on restarting Blast Furnace A1 to be used while Blast Furnace D4 is down. Blast Furnace A1 was relined by National Steel and then idled in 2001.

In Boilerhouse #1, Mr. Chatfield observed substantial over pressuring damage to Boiler #1-6. Mr. Roberts explained that the damage was due to the fact the boiler was not well purged before

shutdown, damaging the furnace and causing visible bulging of the furnace walls. Furnace #1-6 has been shutdown for many years. A blue tarp covered the boiler due to asbestos concerns.

All boilers were missing their nameplates except for Boiler #1-5, which stated that it was constructed in 1937 with a total heating surface of 9,800 ft^2 and a water wall heating surface of 1,500 ft^2. The old coal grating was still visible on Boilers #1-4 and #1-5. Boiler 1-5 has only two burners and the remaining have four burners.

Pickling Line

Mr. Gornick led Ms. Harrison, Ms. Onyszko, and Ms. Koster to inspect the continuous pickling line. After arrival, Steve Wasko explained the process in which products designated as 'hot rolled sheet pickled' are processed through the line and temper rolled into coils. The pickling process begins when the uncoiler receives coils from the hot strip mill and unravels them for processing through the pickling line. The coils are then welded together and sent to the temper mill to remove any surface oxides which may have formed in the hot strip mill. Finally, the coils are sprayed with hydrochloric acid drawn from tanks stored outside and adjacent to the pickling area, and then rinsed with water to remove any residual acid.

The spent acid and water mixture is vacuumed from the pickling line into a fume scrubber, which consists of an atomizer, an initial scrubber, and an additional water sprayer. Water is sprayed inside the fume scrubber to further dilute the acid and is recirculated at a rate approximately between 500-600 gallons per minute, which is measured by a flowmeter. The line the group looked at had four acid tanks at about 190-200 °F. Other tanks were at lower temperatures. USS personnel constantly monitor and record this flow rate as well as differential pressure and acid concentration. There is also a weekly tank check and a weekly visual inspection of the scrubber.

USS personnel explained the capture system is completely enclosed, and that the only problems they have experienced were vibration readings. This happens about once per six months to once per year. In these instances, the lines are completely drained and shut down until maintenance crews can assess and repair the problem, and a National Emissions Standards for Hazardous Air Pollutants (NESHAP) report is submitted. There have also been instances of problems with the blower, but a spare is kept on site. All headers, demisters, atomizers, and blowers are checked once per year for deficiencies.

The pickling line processes about 80-100 coils per day.

At about 9:40 AM, Ms. Harrison, Ms. Onyszko, and Ms. Koster left the pickling line area and headed to Mr. Gornick's office. In his office, Mr. Gornick said that around 2004-2005 the electrostatic precipitator (ESP) was rebuilt per a Consent Order with MDEQ. He also explained how the ESP works. Instantaneous opacity is monitored at the ESP. If this shows increasing opacity during a blow, the oxygen lance is pulled and there is a time gap before oxygen blowing commences. This happens, on average, less than once per day. Every other year the refractory brick in the BOP vessels undergoes relining. BOP Furnace #25 was relined in April and BOP Furnace #26 is scheduled to be relined next year. In 2007, the 12-month rolling ton production average was in the low 3 millions. Mr. Gornick had production data in a spreadsheet dating back to 2005, which is when the plant's Title V permit became effective.

Mr. Gornick also explained that the ladle metallurgical facility (LMF) at the plant is not used often, in part because USS's customers require similar product specifications, so the use of the LMF is not regularly needed. It also adds time to the steel-making process that can be avoided. Instead, the

facility more often uses the argon stir station. The LMF aids in adjusting the chemistry and temperature of steel. The argon stir station primarily adjusts the chemistry of the steel. USS does not often need to adjust the temperature of the steel.

Basic Oxygen Process Shop
At about 10:10 AM, Ms. Harrison, Ms. Onyszko, Ms. Koster, and Mr. Gornick walked through the BOP Shop past the argon stir station, the caster, LMF, vacuum degasser, slag skimming station, and BOP Shop vessels. They left the plant at approximately 11:00 AM to eat lunch.

At about 12:00 PM, Ms. Harrison went inside the BOP Shop with Patrick McCullough while Ms. Onyszko, Ms. Koster, Mr. Gornick, and Paul Krystyniak positioned themselves outside the BOP Shop in order to perform VE readings. Inside, USS personnel explained that the raw iron from the blast furnaces is transported from Zug Island via rail in uncovered torpedo cars to the BOP Shop. Once in the BOP Shop, the cars are tipped into ladles (controlled by a baghouse), processed at a desulfurization station (controlled by a baghouse) and slag is removed via the slag skimming station. Attached to the baghouse is an ESP, which removes particulate from the exhausted gas coming from the BOP Shop ducts and directs the remaining exhaust to the baghouse. The ESP was installed according to a Consent Order in 2005.

Once the hot iron is delivered from Zug Island to the BOP Shop, the torpedo cars are tilted and the iron is drawn into a ladle. The ladle is carried by crane to the desulfurization station where it is prepared for skimming, or slag removal, by adding lime and magnesium. The ladle is then lifted and tilted to accommodate a remote controlled skimmer, which incrementally removes slag from the top of the ladle.

A BOP Shop heat cycle was observed on August 26th between 12:00 and 12:45 PM, during which time Ms. Onyszko took VE readings concurrently with Mr. Krystyniak southeast of the BOP Shop. EPA documented several processing steps as follows:

12:18 PM: Ladle tilted and skimming begins, occurring every 6 seconds;
12:27 PM: Skimming ends;
12:40 PM: Slag is poured; and
12:45 PM: Hot metal from the ladle is charged into BOP furnace.

Ms. Onyszko noted that performing VE readings was challenging at times because there was waste heat boiler steam interfering with her view of the roof monitors. VE readings were conducted for an hour. They are included in Attachment E. When the readings were completed, the group headed back to the office.

Blast Furnaces
Prior to beginning the day's tour of the blast furnace area, Mr. Dickens and Mr. Chatfield spoke with Mr. Fodor about blast furnace slips. Mr. Fodor explained that he keeps a log of blast furnace relief valve openings for each furnace. The USS and EPA inspectors quickly reviewed Mr. Fodor's spreadsheet, which appeared to show that in 2007 there was a relief valve opening for every 450 casts on Blast Furnace B2, while there was one opening for every 38 casts on Blast Furnace D4.

Mr. Dickens, Mr. Chatfield and USS discussed the dirty gas bleeder openings on the blast furnaces in Mr. Fodor's office. Mr. Dickens explained that EPA is interested in minimizing the number of dirty gas bleeder openings. Mr. Fodor showed EPA a USS spreadsheet with the number of unplanned dirty gas

bleeder openings. USS stated that they previously were monitoring these openings, but not tracking them until relatively recently. Mr. Fodor believes that many of these unplanned openings are due to not enough screening of raw materials before placing the material in the blast furnace. This results in a significant number of furnace slips and upsets that result in the dirty gas bleeder openings. From an operational standpoint, he stated that it is better for the furnace to be stabilized and the plant is working to reduce the number of openings. These bleeder openings are not reported to the State.

On as aside, USS stated that there is discussion with an outside company to build a biodiesel plant that uses blast furnace gas to grow algae which is used to generate biodiesel.

EPA inspectors and Mr. Fodor drove to the blast furnaces on Zug Island and met with Ironmaking Division Manager, James Zamiska. Mr. Dickens spoke with Mr. Zamiska about leaking bells. Mr. Zamiska said that opacity from the furnace top caused by leaking bells usually happens in notable step increases as opposed to a slow and gradual increase. This indicates that more discrete damage events may be the cause of poor seals, and not a slow wearing of the seal over time. When asked if USS can quantify the damage to the bell seals, they replied that the blast furnace pressure instruments are not accurate enough to detect leaking bells. USS added that the furnace is taken out of service every five weeks or so, and if the bell seal surfaces are damaged, they are repaired. USS claims that once a bell is shown to be leaking, it takes steps to reduce emissions until the bell seal can be repaired at the next outage.

EPA inspectors met with Bill Jones, Blast Furnace D4 Operations Manager, on the casthouse floor of Blast Furnace D4. The blast furnace was in the process of rebuilding the iron/slag troughs and replacing some of the furnace cooling members. Mr. Jones explained that their goal is to operate 95% of the time and repairs and downtime reduce their ability to operate consistently. USS stated they were "restoring cooling capacity". EPA inspectors noted the injection ports located around the base of the blast furnace used to inject pulverized coal into the bottom of the blast furnace to increase iron production. Pulverized coal is kept in a nearby tower, travels via a pipe and sent to a "distribution center". Mr. Jones explained that unlike Gary and Granite City, their steelshop can take more iron then can currently be produced in the blast furnaces (i.e. they don't need to curtail their operations).

Finally, Mr. Dickens, Mr. Chatfield, and Mr. Fodor returned to Blast Furnace B2. They entered the casthouse and saw that the runner covers were not in place and there was a large amount of particulate in the casthouse that was exiting the roof monitor. After leaving the casthouse, they walked outside to view the Blast Furnace B2 top. There were still significant emissions from the furnace top, similar to the level and frequency as was observed by Mr. Dickens the day before.

Close-Out Conference

The inspectors and USS personnel reconvened at approximately 2 PM for the close-out conference. Mr. Rintoul again joined the proceedings. EPA inspectors thanked USS personnel for taking time out to meet and lead plant tours. EPA inspectors briefed USS personnel on what they inspected and observed. EPA inspectors stated that if further information is required, USS would receive an information request sent in accordance with Section 114 of the CAA. EPA inspectors left the plant at approximately 2:30 PM.

Attachments

Attachment A – Photos
Attachment B - Boiler Fuel Balance spreadsheet
Attachment C – Blast Furnace B2, East Slag Pit VE Readings (August 25, 2008)
Attachment D – BOP Shop VE Readings (August 26, 2008)

Attachment A: Photos

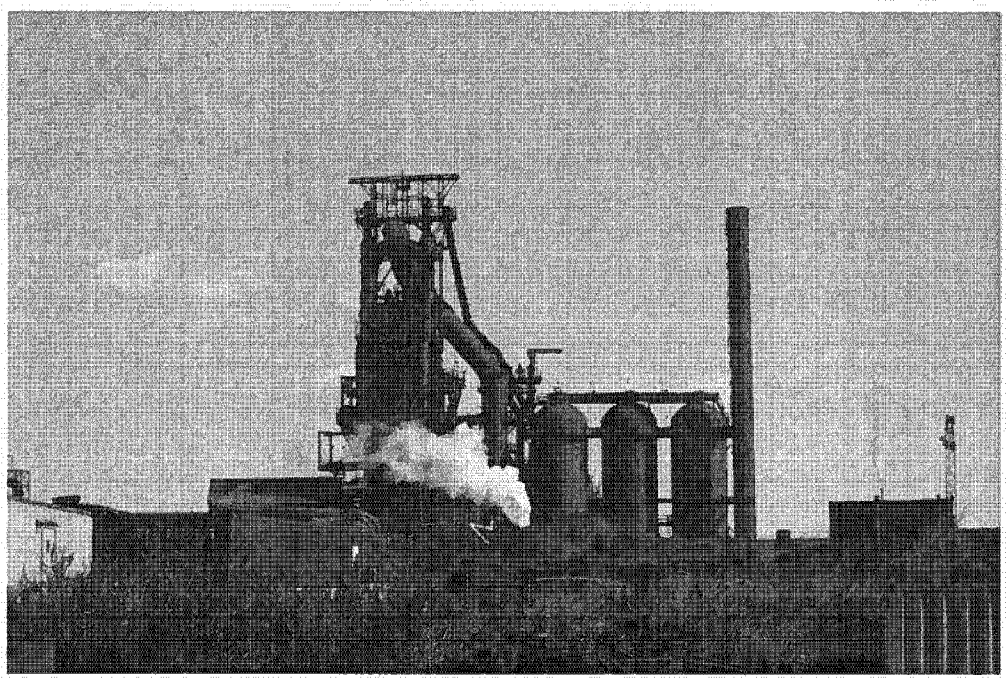

Photo: 1 Blast Furnace A1 (not operating)

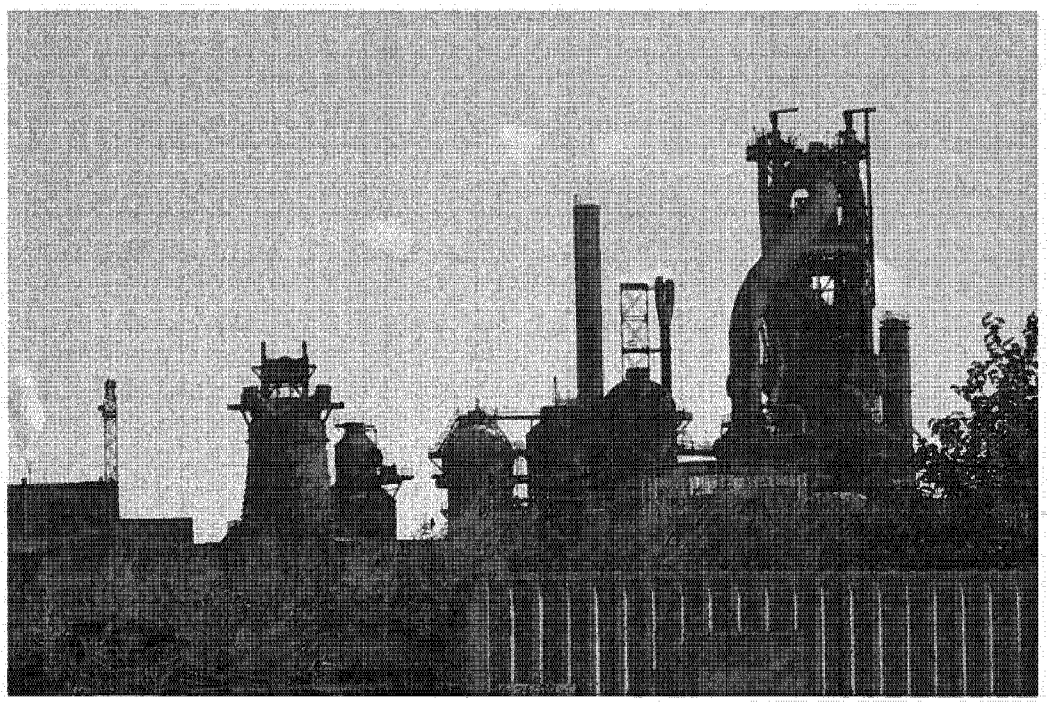

Photo: 2 Blast Furnace B2 (Operating) & Blast Furnace C (being torn down on left)

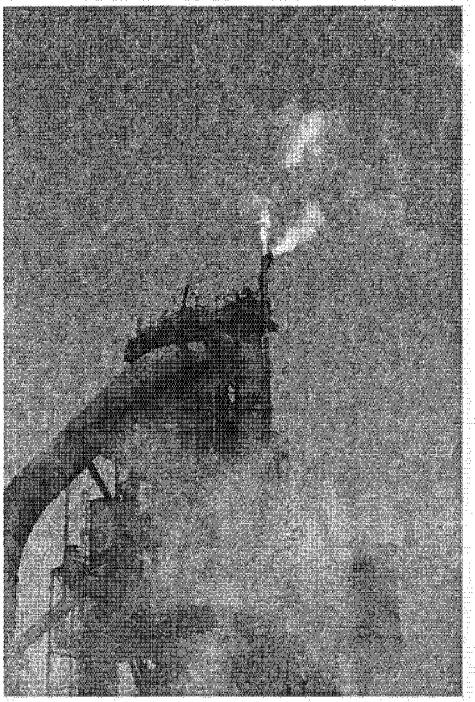

Photo: 3 Blast Furnace B2

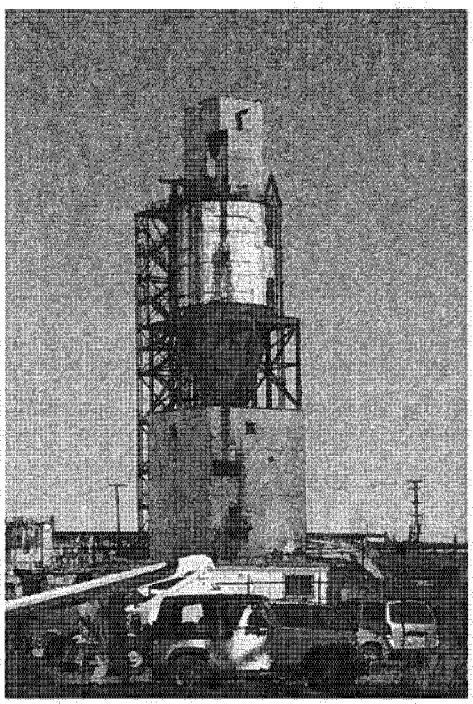

Photo: 4 Blast Furnace Pulverized Coal Tank

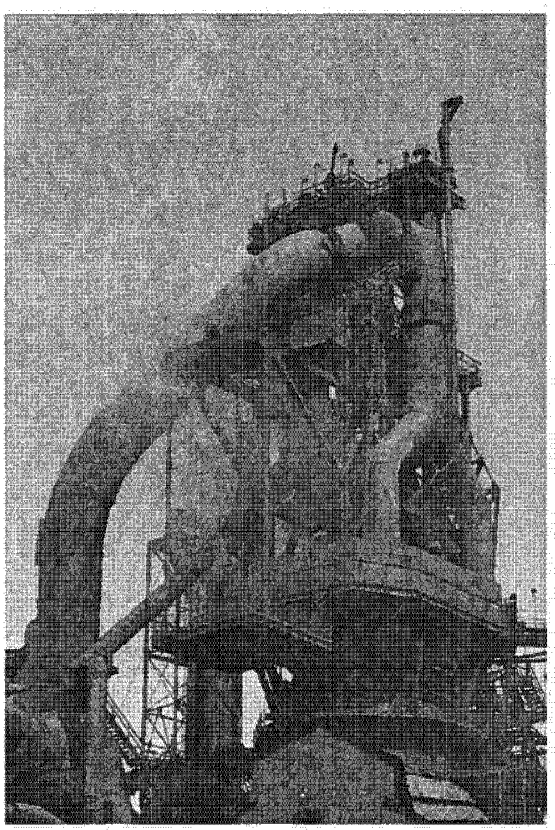

Photo: 5 Blast Furnace B2 (leaking bell)

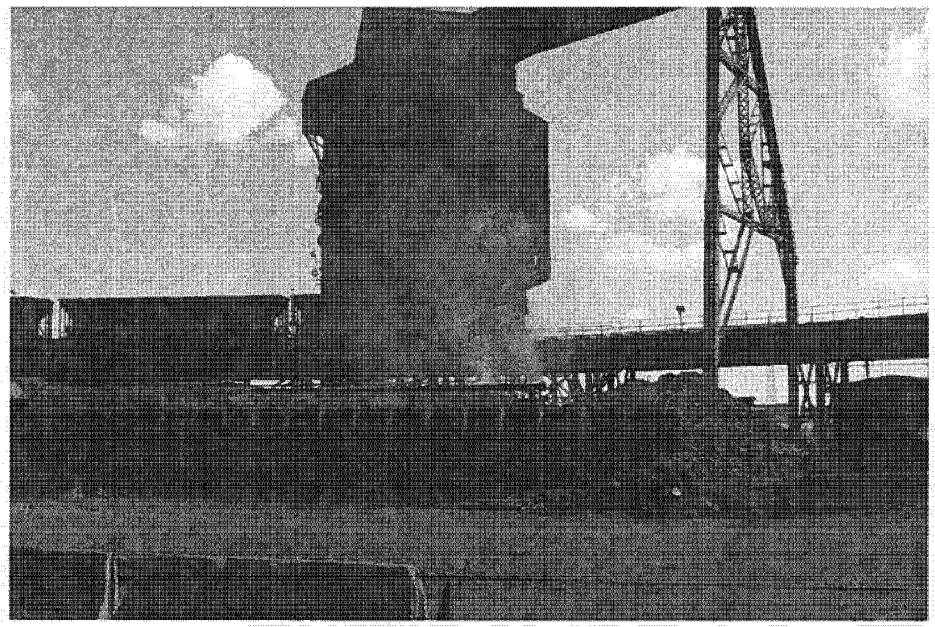

Photo: 6 Blast Furnace B2 Slag Pit

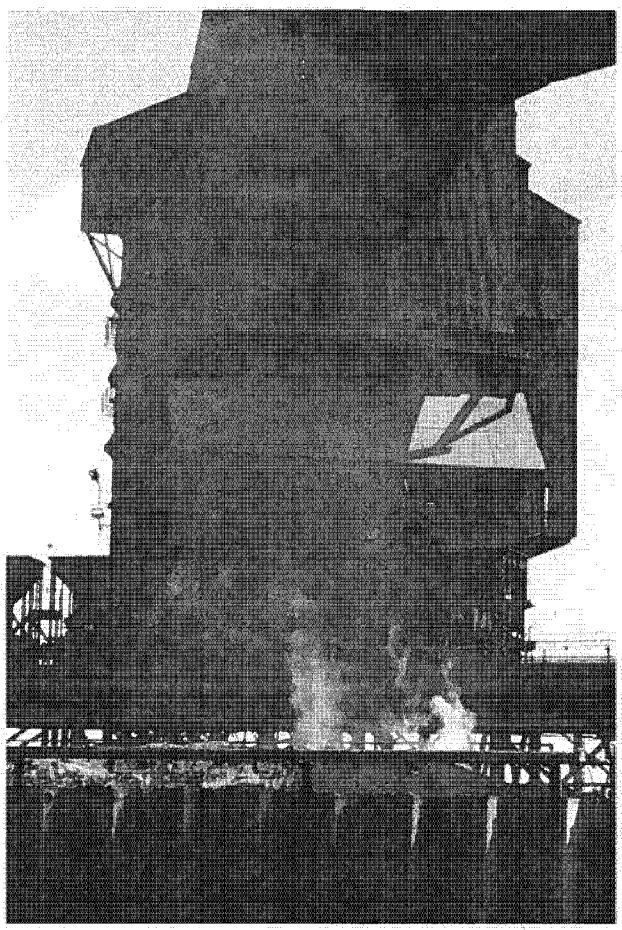

Photo: 7 Blast Furnace B2 Slag Pit

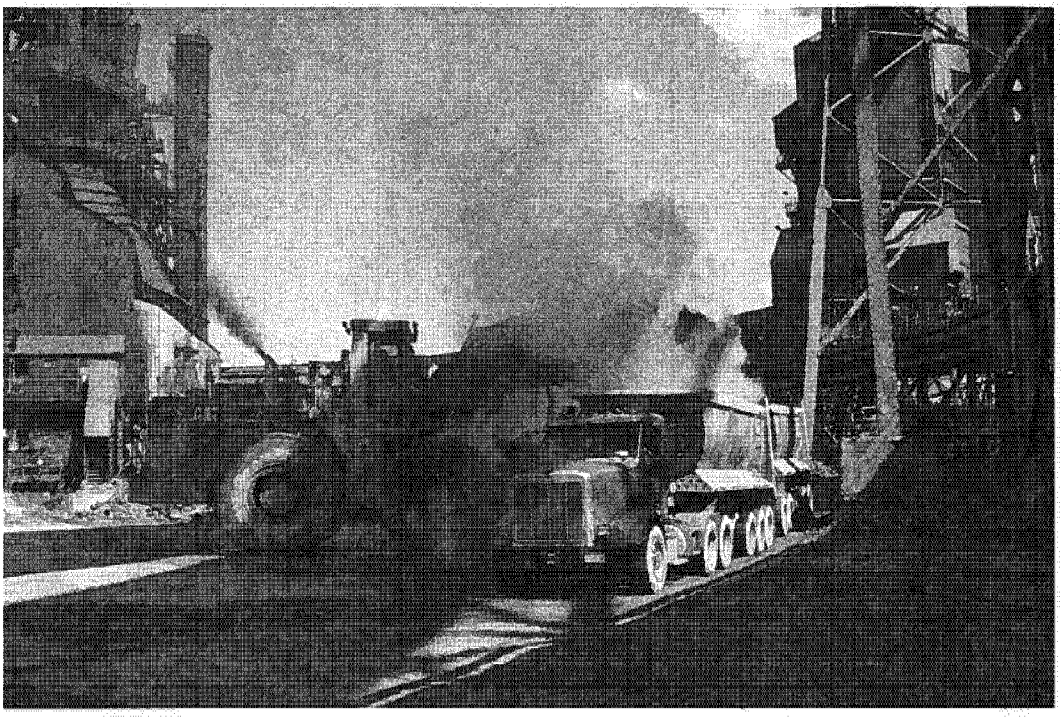

Photo: 8 Slag Loading at Furnace B2

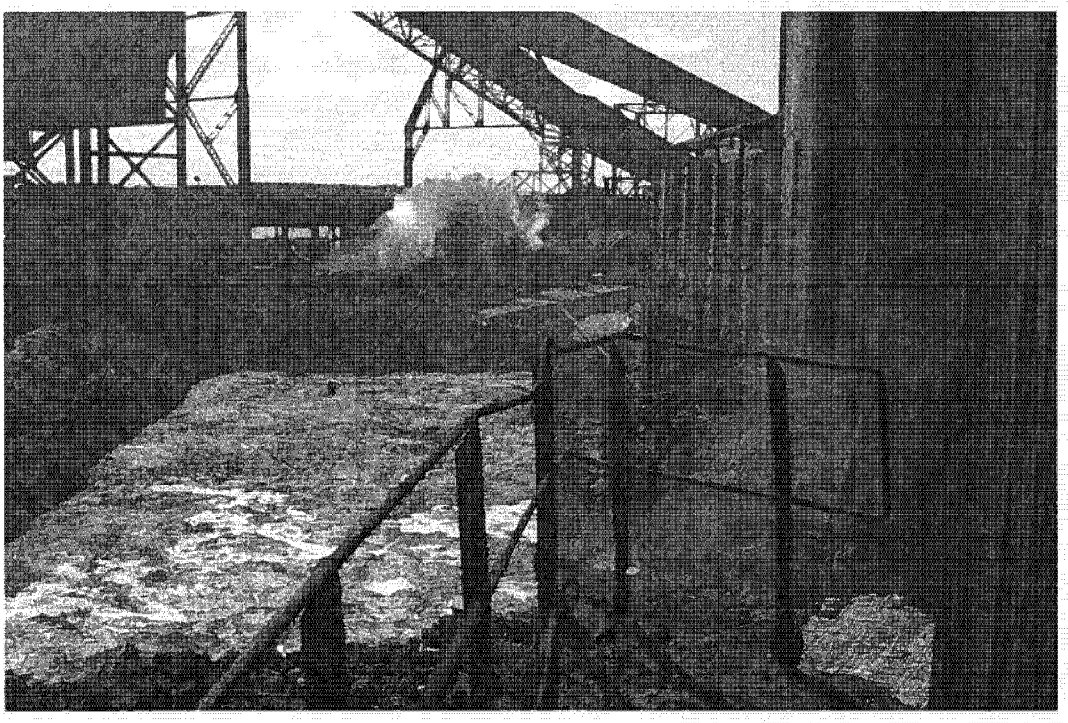

Photo: 9 Slag Pit from B2 Casthouse

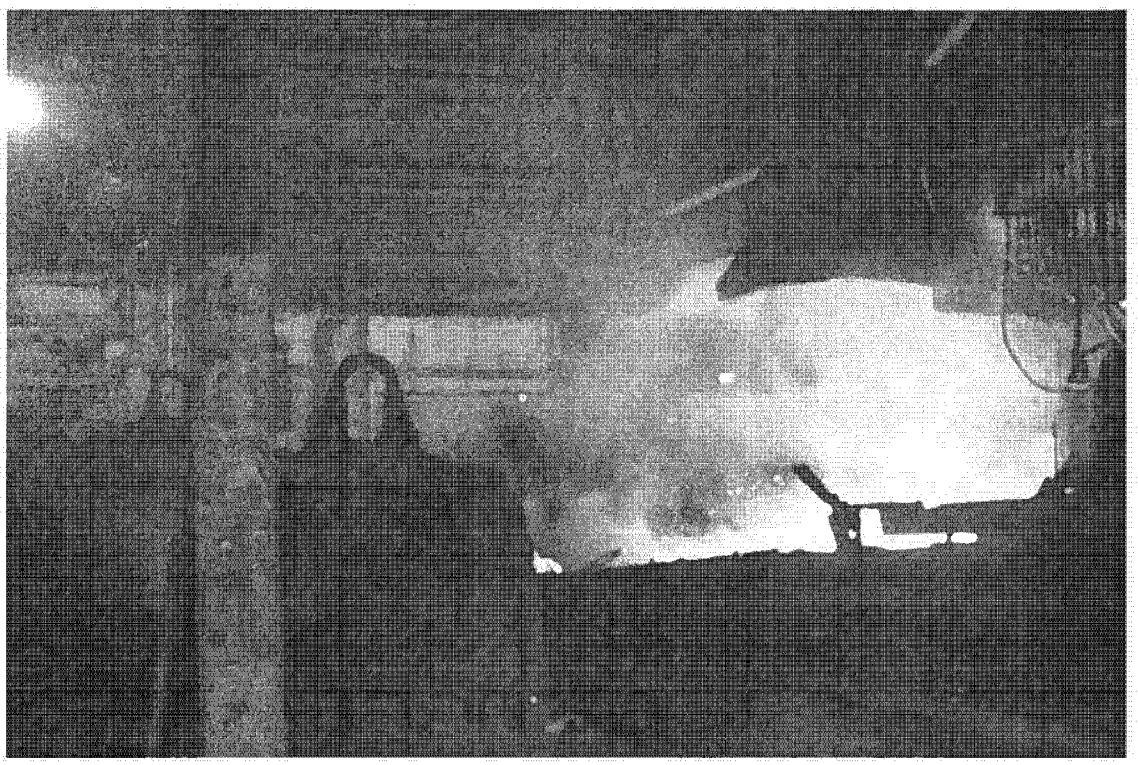

Photo: 10 B2 Casthouse

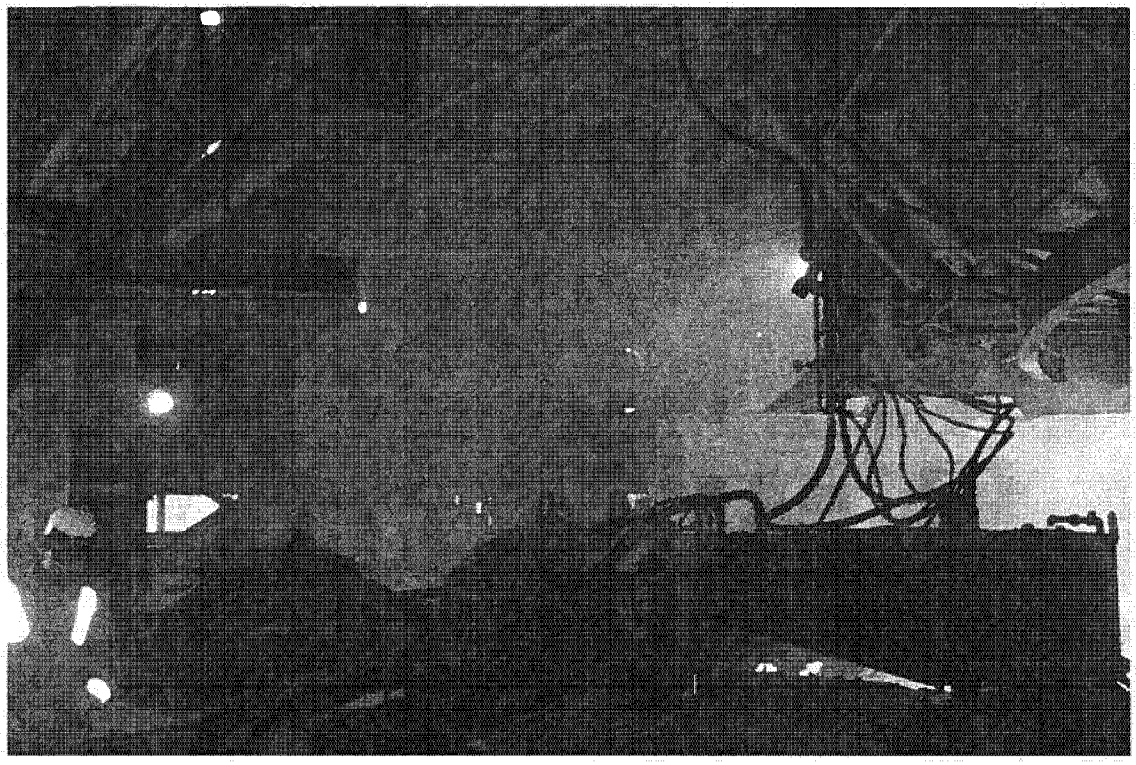

Photo: 11 B2 Casthouse

Photo: 12 B2 Casthouse

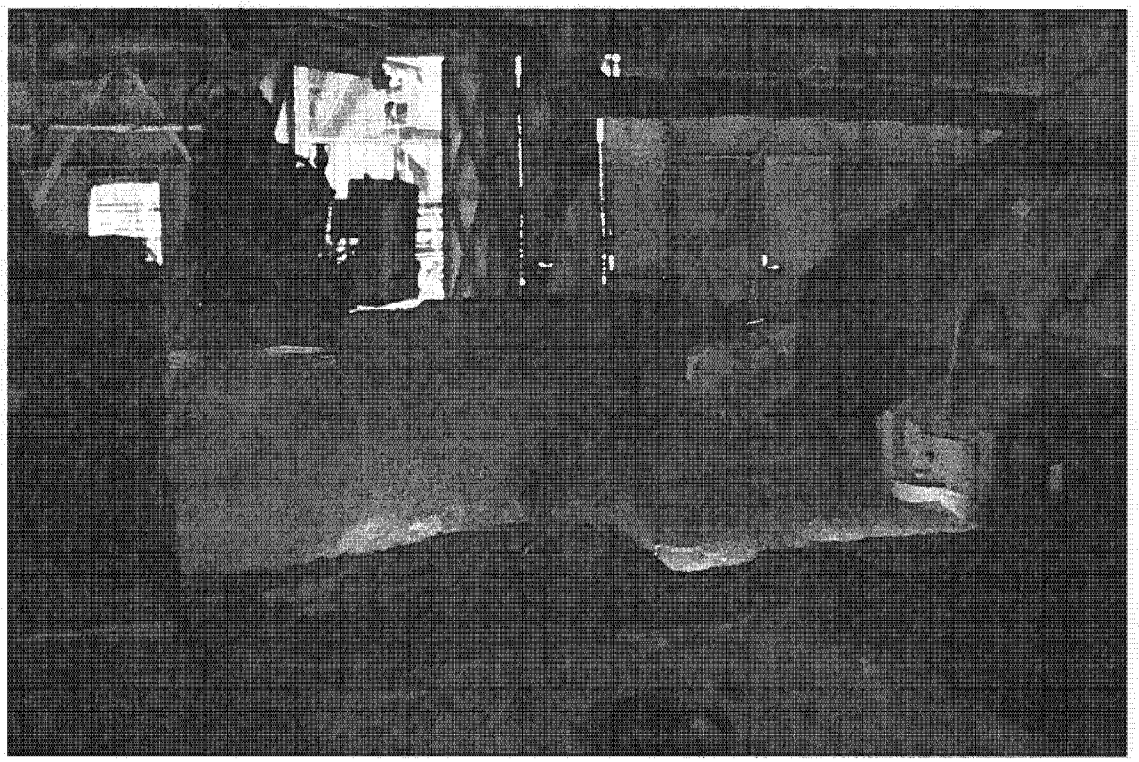

Photo: 13 B2 Casthouse

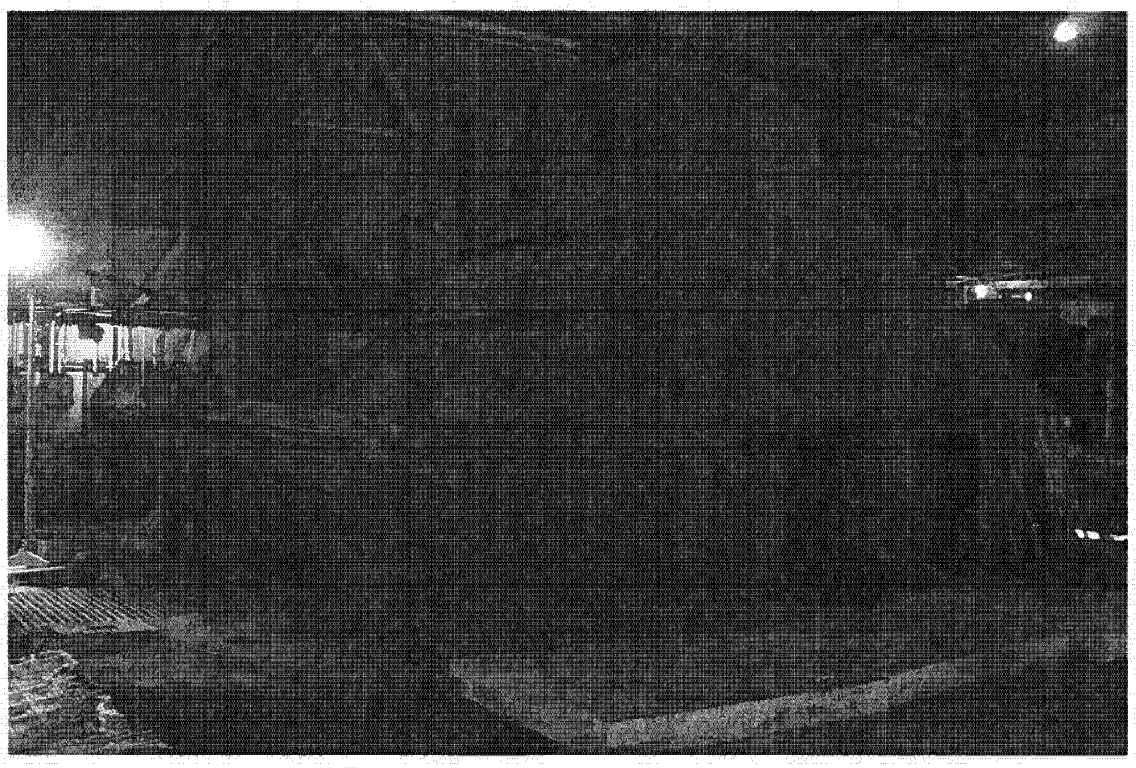

Photo: 14 D4 Casthouse Collection Hood (not operating)

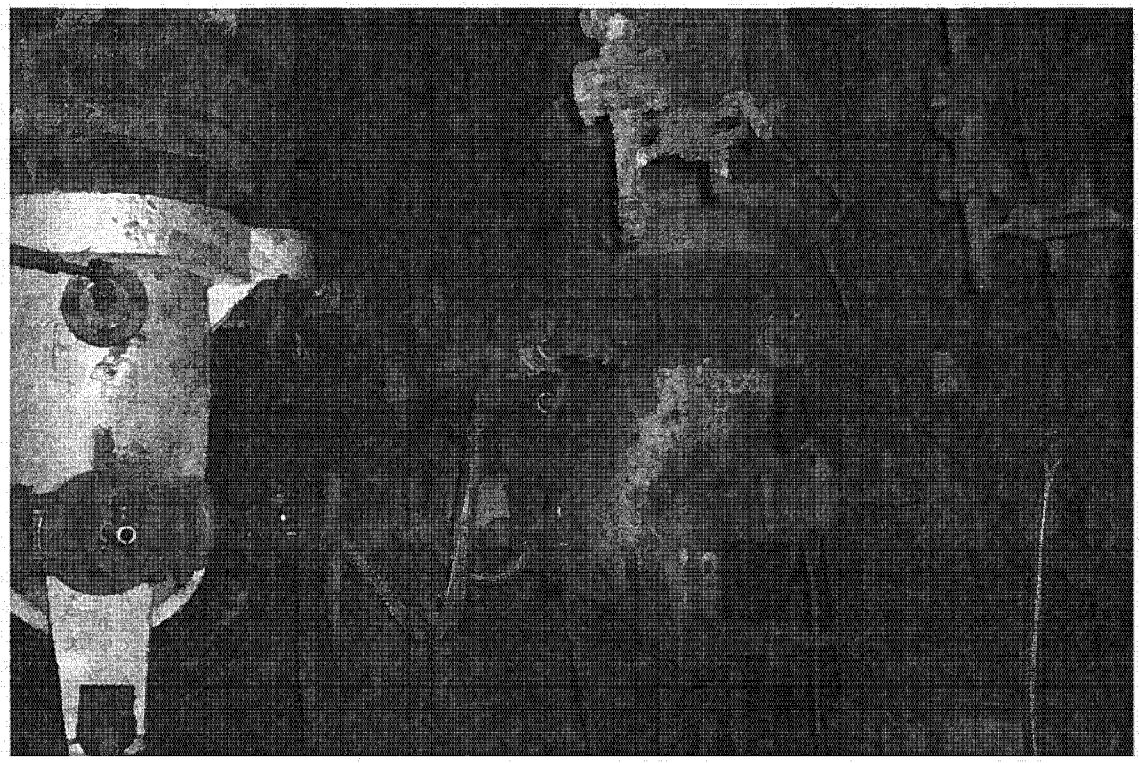

Photo: 15 Furnace D4 Tuyere with Pulverized Coal Injection Port (blue)

Standard bcc's: Official file copy w/attachment(s)

Other bcc's: Ethan Chatfield, AE-17J
Monica Onyszko, AE-17J
Brian Dickens, AE-17J
Gina Harrison, AE-17J

Creation Date:	November 6, 2008
Filename:	C:\Gina Harrison\Cases\Steel\USS Great Lakes\Inspection August 25-26\USS Great Lakes Inspection 082508.doc
Legend:	ARD:AECAB:AECAS(MN/OH)